

Abstract of Disclose

A self refresh operation control device, for use in a semiconductor memory device, includes a self refresh pulse
5 signal generation block for generating a self refresh pulse
signal, a self refresh entry signal and a self refresh mode
clock enable signal in response to a clock enable signal, a
self refresh signal, a self refresh end signal and a test mode
signal, wherein the self refresh pulse signal is generated
10 during the inactivated period of the clock enable signal by
using the test mode signal; a normal mode clock signal
generation block for generating a normal mode clock signal and
a counter reset signal in response to the clock enable signal,
the self refresh mode clock enable signal, a test mode signal
15 and the self refresh signal; and an internal row address
counter in response to the self refresh pulse signal and the
counter reset signal for generating internal addresses for use
in the self refresh operation.